

Reagan Test Site A World Class Range

With more than 40 years of experience in successful ballistic missile testing and space operations support, the Ronald Reagan Ballistic Missile Defense Test Site at Kwajalein Atoll (RTS) serves a vital role in research, development, test, and evaluation for America's defense and space programs.

The more than 100 islands of the U.S. Army Kwajalein Atoll, located in the Republic of the Marshall Islands, form the world's largest lagoon. This feature, coupled with its isolated location and specialized state-of-the-art data-gathering devices, makes RTS uniquely qualified for effective live testing of missiles of all ranges. As a cornerstone of the Pacific test bed, RTS provides for rigorous live testing of both offensive and defensive missiles. For example, intercontinental ballistic missiles can be launched into the Kwajalein lagoon from various locations within the continental United States and intermediate- and short-range missiles from various Pacific Island locations.

RTS is operated by a government/contractor team which includes military personnel, government civilians, technical support contractors, and scientists from MIT Lincoln Laboratory.

Space Operations

RTS supports the U.S. Army space mission, the U.S. Air Force, NASA space transportation system operations and experiments, and DoD and commercial satellite launches.

As part of the U.S. Army Space and Missile Defense Command's support to the U.S. Strategic Command, RTS conducts space-object identification and provides orbital information on new foreign launches. RTS' ALTAIR and TRADEX radars are two of four radars supporting deep space and near earth satellite observations for the Space Surveillance Network and the only two with an equatorial location. Both provide data on more than 42,000 tracks per year.

Millimeter wave (MMW) and ALCOR radars provide high-resolution, near-real-time images of space objects.

Missile Testing

- RTS is the only location available for testing U.S. exoatmospheric ballistic missile defense intercepts.
- RTS has proven its ability to support Patriot missile intercepts of Scud targets in tactical scenarios.
- RTS supports a full spectrum of land impacts, in addition to its recovery of re-entry vehicles and test articles from the lagoon.
- RTS' isolated location minimizes environmental and safety constraints and allows control of the radio frequency spectrum.

RTS Sensor Complex

The \$4 billion RTS state-of-the-art complex of sophisticated radar, optical and telemetry sensors provides unsurpassed quantitative and qualitative data acquisition. The instrumentation at RTS includes:

- **Radar:** High-resolution radars provide precision metric, signature, and imaging for deep-space operations, satellite observations, strategic re-entry missions, and multiple-intercept engagement tracking. RTS' wide range of radar capability includes S-band, L-band, C-band, Ka-band, and W-band, as well as beacon tracking, passive skin tracking, and impact scoring.

- **Optics:** Precise optical metric data are collected on objects both inside and outside the atmosphere using large-aperture optics equipped with video, infrared, and film sensors. RTS' optics capability includes 35/70-mm cameras with frame rates up to 2,500 frames per second and focal lengths to 480 inches.

- **Telemetry:** Critical onboard missile information transmitted to the ground is collected with nine geographically dispersed telemetry antennas capable of receiving data at frequencies of 1,700 to 2,400 MHz. State-of-the-art ground stations receive, record, and display high data rate links up to 30 Mbps.

RTS also offers launch capability for strategic interceptors that destroy their targets in space, smaller multi-stage scientific rockets that make measurements within the atmosphere, and all types of theater-range missiles. RTS' integrated command and control center provides technical range support with its secure fiber optic network and offers the range user calibration, range timing, meteorology, flight and ground safety, logistics, and data reduction and analysis services.

The Reagan Test Site continues to be a vital national interest and a critical part of the Pacific test bed.

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